

PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a new traffic control signal at the intersection of MD 924 (Emmorton Road) and Plumtree Road/Entrance to Brooks Property in Harford County, Maryland. MD 924 is considered to run in a north/south direction.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA six (6) phase, full-traffic-actuated mode. There will be an exclusive/permissive left turn phase for both the north and southbound movements of MD 924. The MD 924 through movements will operate concurrently. The Plumtree Road/Entrance to Brooks Property through movements will operate concurrently.

An eight phase, full-traffic-actuated, solid state digital controller with intersection monitor and harness, battery back-up, (1) four-channel rack mounted time delay output loop detector amplifier, and video detection equipment housed in a base mounted cabinet are to be installed at this location.

A phone service will be provided by Verizon Communication.

EQUIPMENT LIST

A. Approved S.H.A. equipment to be purchased by the Developer and installed by the Contractor. All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
1	EA	818	27 ft. steel mast arm pole with a 38 ft. mast arm
1	EA	818	27 ft. steel mast arm pole with a 50 ft. mast arm
1	EA	818	27 ft. steel twin mast arm pole with 70 ft. and 50 ft. mast
1	EA	816	Standard S.H.A. traffic signal controller, base mounted cabinet, (1) four-channel loop detector amplifier, and video detection equipment (Note: Controller and cabinet shall be purchased from Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650).
6	EA	814	12 in., one-way, three section (R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	814	12 in., one-way, five section (R,Y,YA,G,GA) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	814	12 in./8 in., one-way, five section (12 in. YA, GA/ 8 in. R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	813	36 in. x 42 in. R 10-12 sign with mast arm mounting hardware.
2	EA	813	30 in. x 36 in. R 3-5(L) sign with mast arm mounting hardware.
1	EA	813	30 in. x 36 in. R 3-5(R) sign with mast arm mounting hardware.
2	EA	813	16 in. x Var. D-3(1) (Dual Faced) sign with under mast arm mounting hardware.
2	EA	813	48 in. x 48 in. W 3-3 "NEW" sign for ground mounting.
1	EA	813	36 in x 36 in. W 3-3 "NEW" sign for ground mounting.
1	EA	---	Micro-loop probe (set of 3) with 750 ft. lead-in cable.
1	EA	---	Micro-loop probe (set of 3) with 500 ft. lead-in cable.
2	EA	806	15 ft. luminaire arm.
2	EA	806	250 W H.P.S. lamp and luminaire.
4	EA	---	Video Detection Camera equipment (to include detector cables). (3- 200 LF; 1- 100 LF lengths)

B. Equipment to be furnished and/or installed by the Contractor.

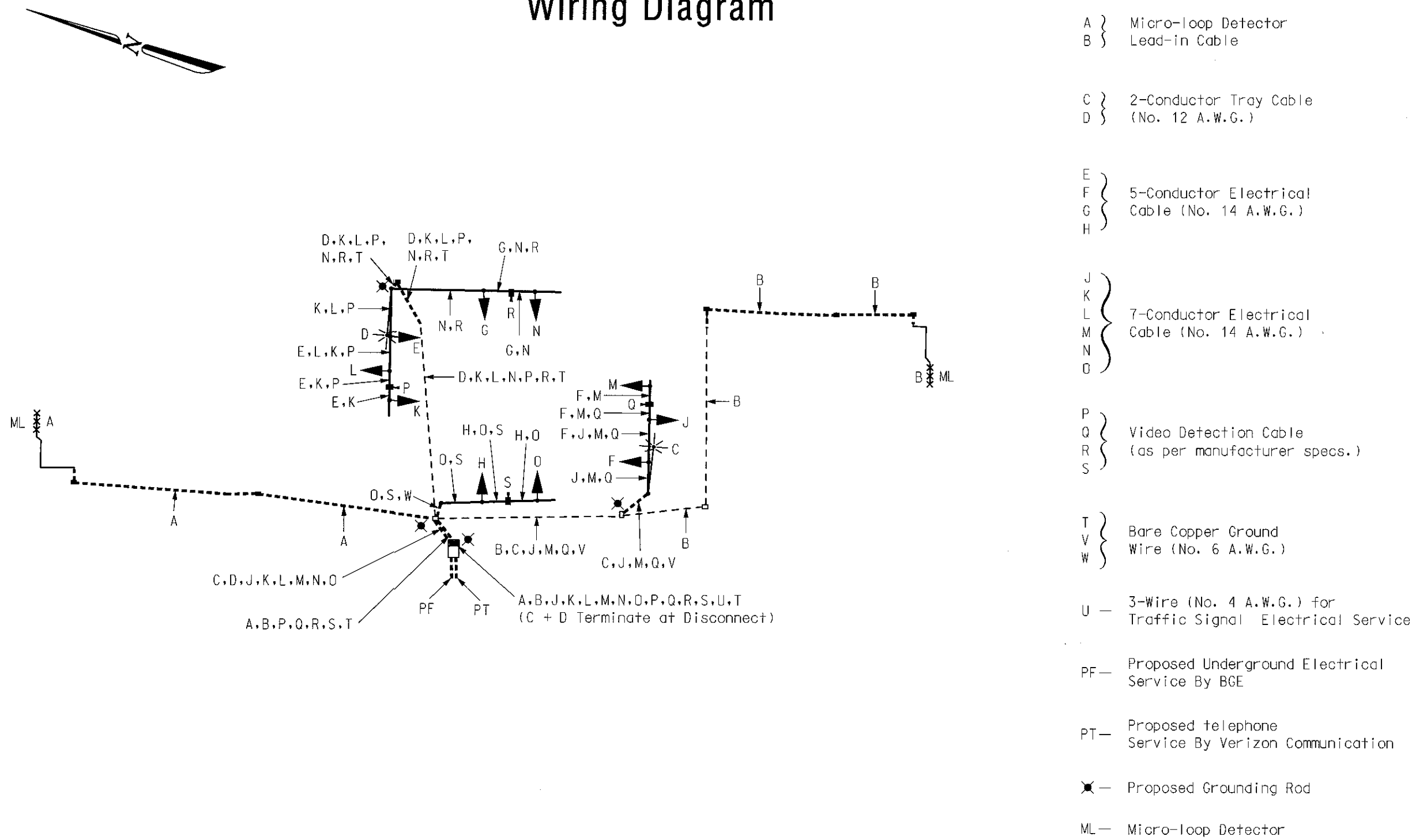
All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
4	CY	205	Test pit excavation.
6	EA	811	Handhole.
105	LF	815	Sawcut for signal loop detector.
300	LF	810	2-conductor electrical tray cable (No. 12 A.W.G.).
120	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
900	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
25	LF	810	3-wire (No. 4 A.W.G.) electrical cable.
205	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
10	LF	805	1 in. liquid tight flexible non-metalic conduit for loop detector sleeve.
500	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
75	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
35	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
50	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
11.20	CY	801	Concrete foundation for traffic signal equipment.
4	EA	804	Ground rod - 3/4 in. diameter x 10 ft. length.
1	EA	807	Control and distribution equipment (120/240 V, one phase, three wire system) for a type B-2 underground electrical service.
160	LF	556	24 in. wide HAPPTM - white for stop line.
100	LF	812	4 in. x 6 in. wood sign support.
1	EA	---	Remove existing sign - ground.
Lump Sum	LS	---	As-built for S.H.A. (on CADD).

Phase Chart

	1	2	3	4	5	6	7	8	9	10
Phase 1 & 5	R	R	R	R	R	R	R	R	R	R
1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6	R	R	R	R	R	R	R	R	R	R
Phase 1 & 6	G	G	G	R	R	R	R	R	R	R
1 Change	G	G	G	R	R	R	R	R	R	R
Phase 2 & 5	R	R	R	G	G	G	R	R	R	R
5 Change	R	R	R	G	G	G	R	R	R	R
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R
Phase 4 & 8	R	R	R	R	R	R	G	G	G	G
4 & 8 Change	R	R	R	R	R	R	Y	Y	Y	Y
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R

Wiring Diagram



CONTACT LIST

The contact persons for District #4 are as follows:

Mr. Dave Makowski  
District Engineer  
410-321-2810

Mr. Randall Scott  
Assistant District Engineer - Traffic  
410-321-2781

Mr. ~~Gregory~~ <sup>Joe</sup> McMahon  
Assistant District Engineer - Utility  
410-321-~~3466~~ <sup>2841</sup>

Mr. Dave Ramsey  
Assistant District Engineer - Maintenance  
410-321-2781

Mr. Richard L. Daff  
Chief, Traffic Operations Division  
410-787-7630

The Power Company Representative is:  
Baltimore Gas and Electric Company  
7317 Parkway Drive South  
Hanover, Maryland 21076  
410-859-9070

 The Traffic Group, Inc. 410-931-6600 Fax 410-931-6601	APPROVALS	 MARYLAND DOT - STATE HIGHWAY ADMINISTRATION Office of Traffic & Safety TRAFFIC ENGINEERING DESIGN DIVISION (General Information Plan) <b>MD 924 (Emmorton Road) at Plumtree Road</b>		DRAWN BY: Frank Hoeckel	F.A.P. NO. N/A	TS NO. 4063	SHEET NO. 2 OF 2
	TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION			CHECKED BY: N/A	S.H.A. NO. BW996M82	T.I.M.S. NO. E-355	
	ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION			SCALE: N/A	COUNTY: Harford		
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION			DATE: January 7, 2002	LOG MILE: 12092402.95		
DIRECTOR, TRAFFIC & SAFETY							